

Essential Fish Habitat Description **Monkfish (*Lophius americanus*)**

In its *Report to Congress: Status of the Fisheries of the United States* (September 1997), NMFS determined monkfish is currently overfished. This determination is based on an assessment of stock size. Essential Fish Habitat for monkfish is described as those areas of the coastal and offshore waters (out to the offshore U.S. boundary of the exclusive economic zone) that are designated on Figures 4.1 - 4.4 and meet the following conditions:

Eggs: Surface waters of the Gulf of Maine, Georges Bank, southern New England, and the middle Atlantic south to Cape Hatteras, North Carolina as depicted in Figure 4.1. Generally, the following conditions exist where monkfish egg veils are found: sea surface temperatures below 18° C and water depths from 15 - 1000 meters. Monkfish egg veils are most often observed during the months from March to September.

Larvae: Pelagic waters of the Gulf of Maine, Georges Bank, southern New England and the middle Atlantic south to Cape Hatteras, North Carolina as depicted in Figure 4.2. Generally, the following conditions exist where monkfish larvae are found: water temperatures 15° C and water depths from 25 - 1000 meters. Monkfish larvae are most often observed during the months from March to September.

Juveniles: Bottom habitats with substrates of a sand-shell mix, algae covered rocks, hard sand, pebbly gravel, or mud along the outer continental shelf in the middle Atlantic, the mid-shelf off southern New England, and all areas of the Gulf of Maine as depicted in Figure 4.3. Generally, the following conditions exist where monkfish juveniles are found: water temperatures below 13° C, depths from 25 - 200 meters, and a salinity range from 29.9 - 36.7‰.

Adults: Bottom habitats with substrates of a sand-shell mix, algae covered rocks, hard sand, pebbly gravel, or mud along the outer continental shelf in the middle Atlantic, the mid-shelf off southern New England, along the outer perimeter of Georges Bank and all areas of the Gulf of Maine as depicted in Figure 4.4. Generally, the following conditions exist where monkfish adults are found: water temperatures below 15° C, depths from 25 - 200 meters, and a salinity range from 29.9 - 36.7‰.

Spawning Adults: Bottom habitats with substrates of a sand-shell mix, algae covered rocks, hard sand, pebbly gravel, or mud along the outer continental shelf in the middle Atlantic, the mid-shelf off southern New England, along the outer perimeter of Georges Bank and all areas of the Gulf of Maine as depicted in Figure 4.4. Generally, the following conditions exist where spawning monkfish adults are found: water temperatures below 13° C, depths from 25 - 200 meters, and a salinity range from 29.9 - 36.7‰. Monkfish are observed spawning most often during the months from February to August.

The Council acknowledges potential seasonal and spatial variability of the conditions generally associated with this species.

Essential Fish Habitat
Monkfish (*Lophius americanus*) Eggs

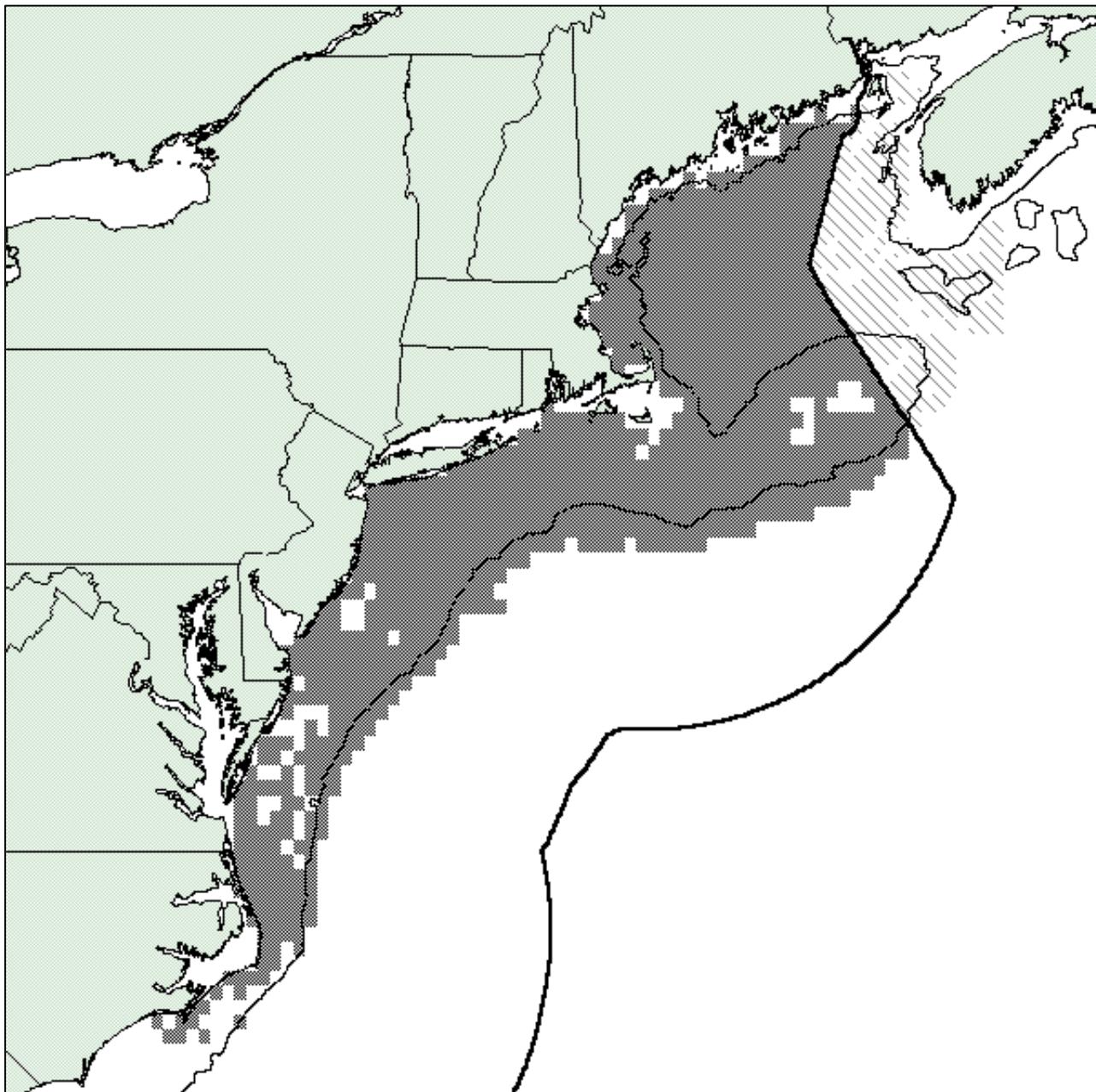


Figure 4.1: The EFH designation for monkfish eggs is based upon alternative 4 for monkfish larvae in combination with alternative 4 for monkfish adults. Due to the difficulty of sampling monkfish eggs, the combination of larvae and adults was used as a proxy. This alternative was selected to be as conservative as possible given the lack of information on the distribution of monkfish eggs. The light shading represents the entire observed range of adult monkfish.

Essential Fish Habitat
Monkfish (*Lophius americanus*) Larvae

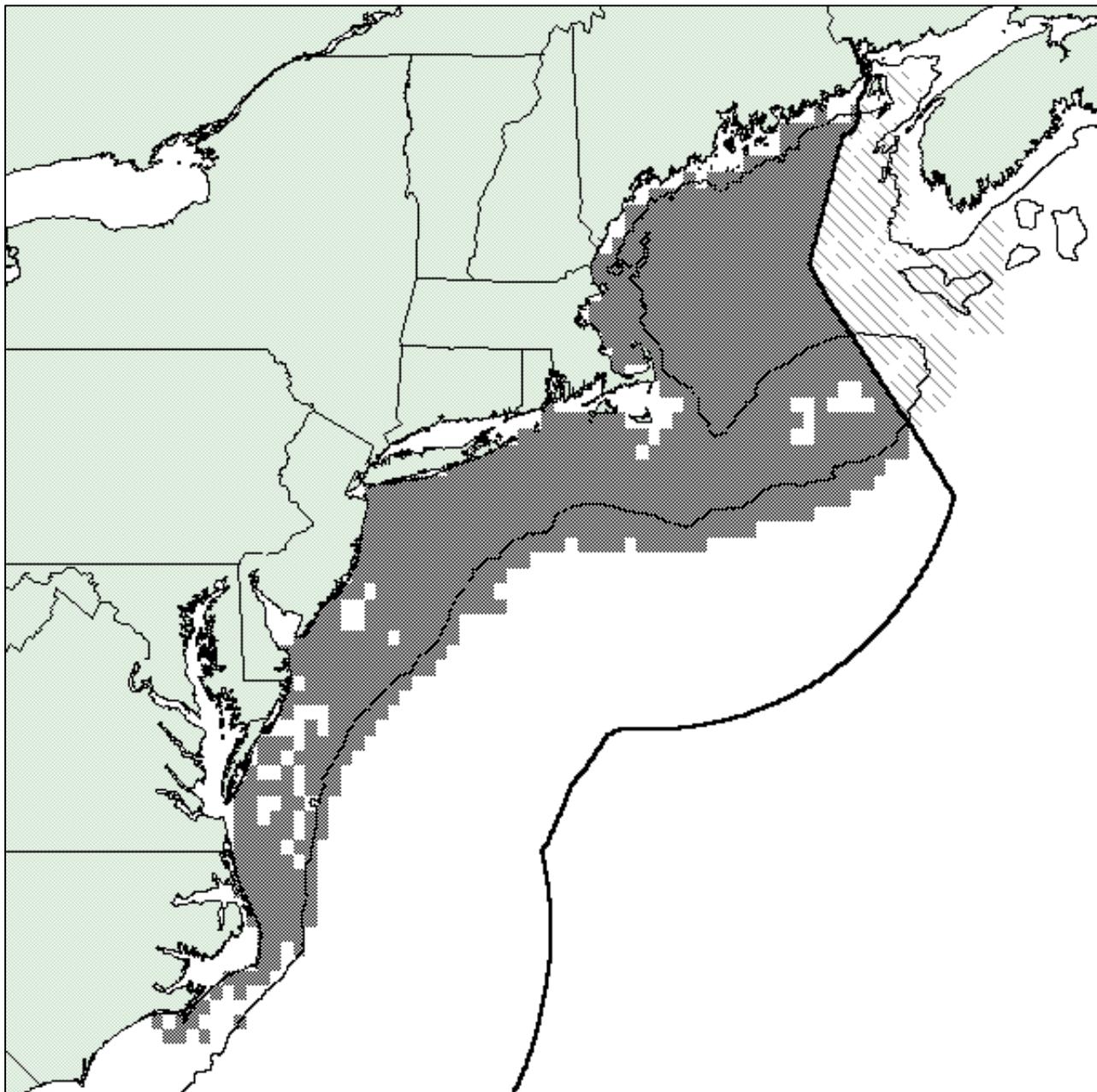


Figure 4.2: The EFH designation for monkfish larvae is based upon alternative 4 for monkfish larvae in combination with alternative 4 for monkfish adults. Due to the somewhat patchy and sparse distribution of monkfish larvae observations, the combination of larvae and adults was used as a proxy. This alternative was selected to be as conservative as possible given the patchy nature of the distribution of monkfish larvae. The light shading represents the entire observed range of adult monkfish.

Essential Fish Habitat
Monkfish (*Lophius americanus*) Juveniles

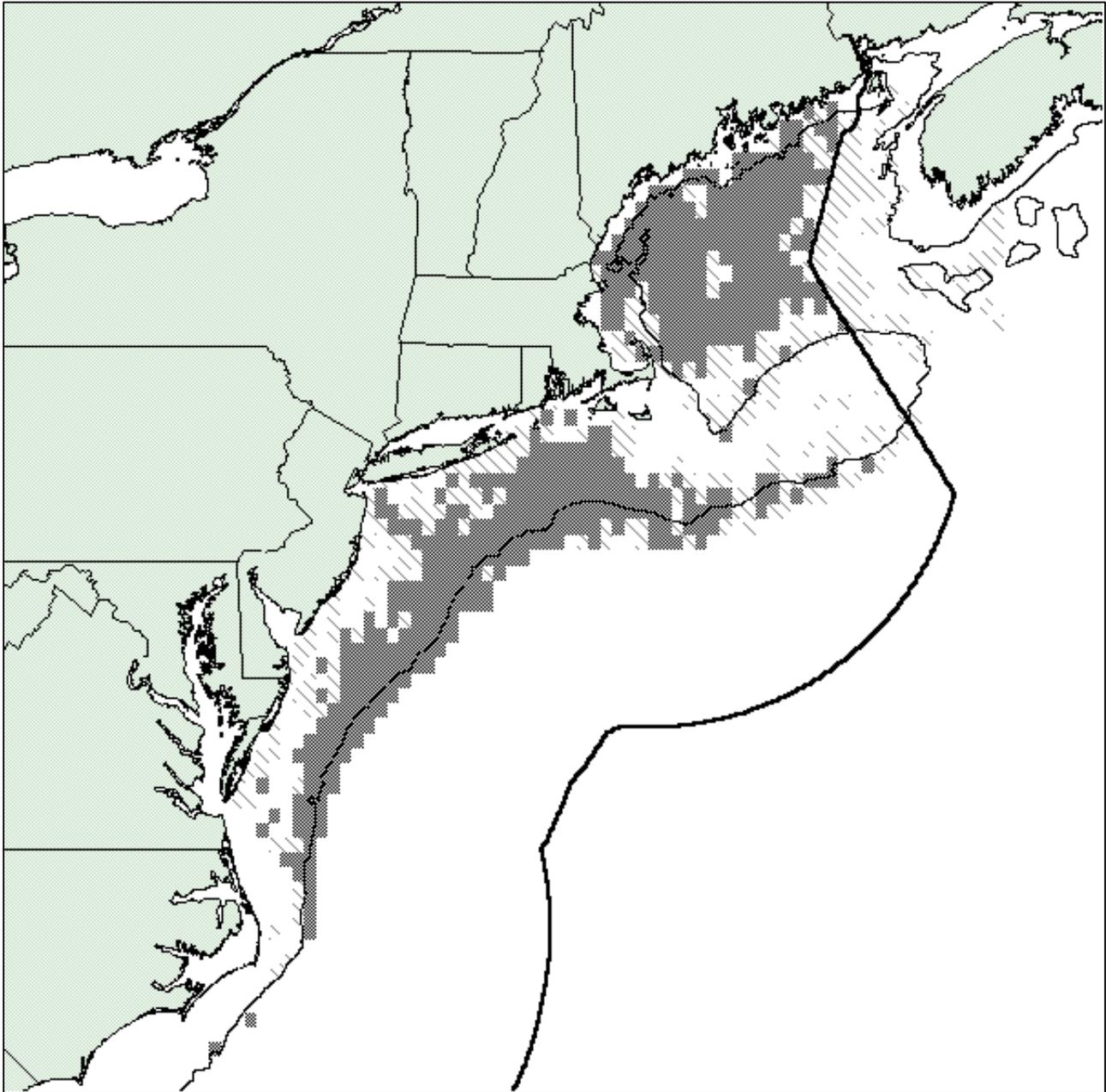


Figure 4.3: The EFH designation for juvenile monkfish is based upon alternative 3 for monkfish juveniles. This alternative was selected because it included all areas where monkfish juveniles were observed in relatively high concentrations, but did not include areas where they occurred in low concentrations. The light shading represents the entire observed range of juvenile monkfish.

Essential Fish Habitat
Monkfish (*Lophius americanus*) Adults

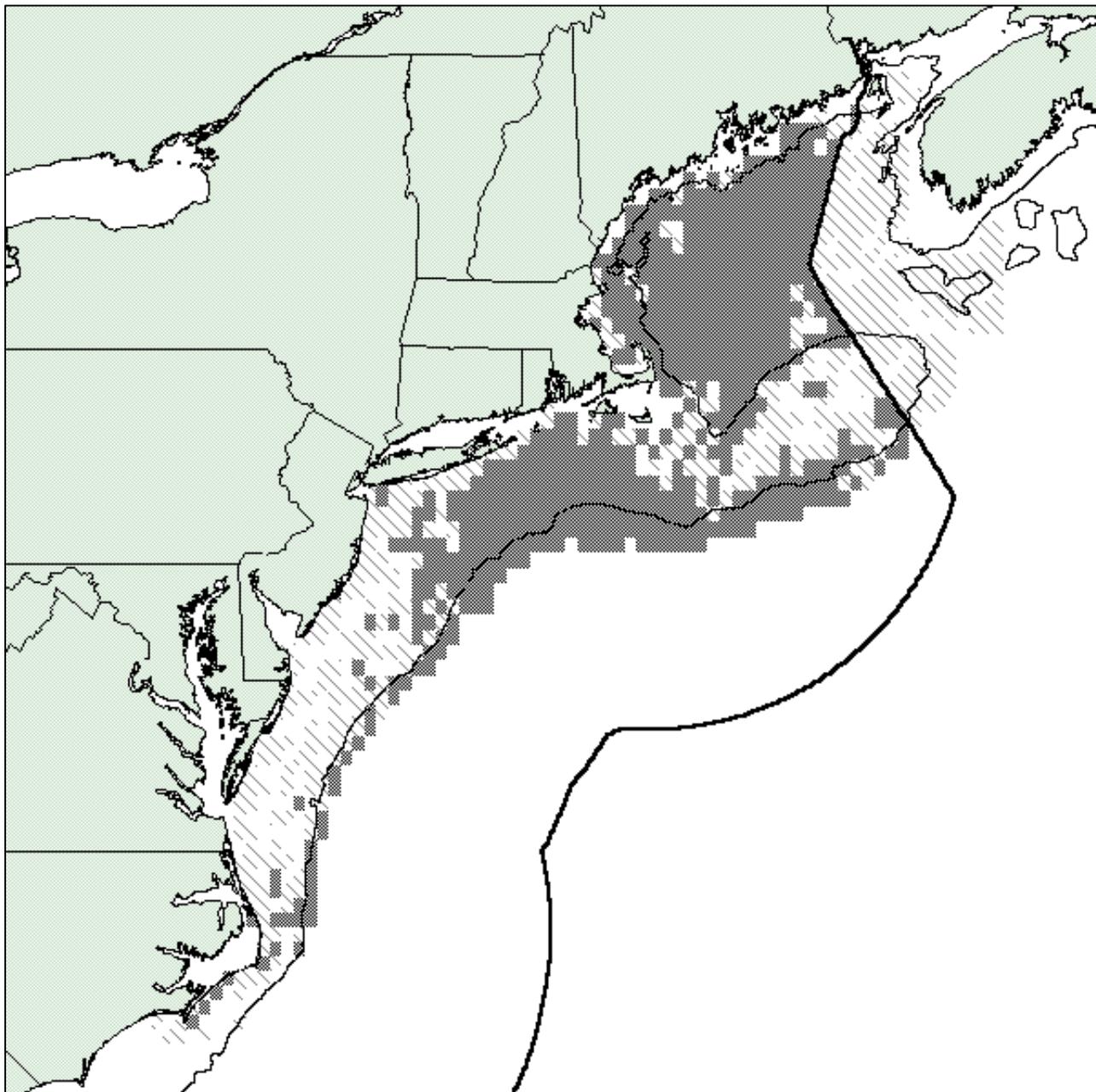


Figure 4.4: The EFH designation for adult monkfish is based upon alternative 3 for monkfish adults. This alternative was selected because it included all areas where monkfish adults were observed in relatively high concentrations, but did not include areas where they occurred in low concentrations. The light shading represents the entire observed range of adult monkfish.